

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

CLAIMS

1. (Currently Amended) A method for removing particles from a surface, comprising:
heating a fluid;
applying the a fluid to the surface so as to coat the particles on the surface with the fluid;
and
applying a suction force after applying the fluid so as to remove from the surface a majority of the particles that have a dimension of less than approximately one micron.
2. (Original) A method according to claim 1, wherein the fluid comprises water.
3. (Original) A method according to claim 1, wherein applying the fluid comprises using a carrier gas to convey the fluid to the surface.
4. (Currently Canceled)
5. (Currently Amended) A method according to claim 1 4, wherein heating the fluid comprises heating the fluid to 30-80 °C.
6. (Original) A method according to claim 1, wherein applying the suction force comprises waiting for a predetermined time period following applying the fluid before applying the suction force.
7. (Original) A method according to claim 6, wherein the time period is in the range of 0.01 to 2 seconds.
8. (Original) A method according to claim 1, wherein applying the fluid comprises applying the fluid through a channel held approximately perpendicularly to the surface.

9. (Original) A method according to claim 8, wherein applying the suction force comprises applying the suction force through an annular channel surrounding the channel through which the fluid is applied.
10. (Original) A method according to claim 9, wherein applying the suction force further comprises heating the annular channel and the fluid delivery channel.
11. (Original) A method according to claim 1, wherein applying the suction force comprises applying the suction force through a channel held at a tilt of 1-40 degrees from a perpendicular angle to the surface.
12. (Original) A method according to claim 1, wherein applying the suction comprises applying the suction so as to generate a turbulent flow regime at the surface.
13. (Original) A method according to claim 1, and wherein applying the suction force comprises applying the suction force for a period of time between 0.1 and 10 seconds.
14. (Original) A method according to claim 1, wherein at least some of the particles removed have a dimension less than 0.2 micron.
15. (Original) A method according to claim 1, wherein applying the suction comprises removing the particles via a nozzle having an aperture of less than 10 mm.
16. (Original) A method according to claim 15, wherein the aperture is between 0.5 and 5 mm.
17. (Original) A method according to claim 15, wherein the nozzle is placed approximately 0.1-0.5 mm above the surface.
18. (Original) A method according to claim 1, wherein the surface is the surface of a semiconductor wafer.
19. (Currently Amended) A method for removing particles from a surface, comprising:
heating a fluid;
applying the a fluid to the surface on which the particles are distributed so as to coat the particles with the fluid; and

applying a suction force in a vicinity of the surface after applying the fluid so as to generate a horizontal flow velocity of the fluid of at least 100 m/s, thereby removing at least some of the particles.

20. (Original) A method according to claim 19, wherein the fluid 15 comprises water.
21. (Original) A method according to claim 19, wherein applying the fluid comprises using a carrier gas to convey the fluid to the surface.
22. (Currently Canceled)
23. (Currently Amended) A method according to claim 19 ~~22~~, wherein heating the fluid comprises heating the fluid to 30-80 °C.
24. (Original) A method according to claim 19, wherein applying the suction force comprises waiting for a predetermined time period following applying the fluid before applying the suction force.
25. (Original) A method according to claim 24, wherein the time period is in the range of 0.01 to 2 seconds.
26. (Original) A method according to claim 19, wherein applying the fluid comprises applying the fluid through a channel held approximately perpendicularly to the surface.
27. (Original) A method according to claim 26, wherein applying the suction force comprises applying the suction force through an annular channel surrounding the channel through which the fluid is applied.
28. (Original) A method according to claim 27, wherein applying the suction force further comprises heating the annular channel and the fluid delivery channel.
29. (Original) A method according to claim 19, wherein applying the suction force comprises applying the suction force through a channel held at a tilt of 1-40 degrees from a perpendicular angle to the surface.
30. (Original) A method according to claim 19, wherein applying the suction comprises applying the suction so as to generate a turbulent flow regime at the surface.

31. (Original) A method according to claim 19, and wherein applying 20 the suction force comprises applying the suction force for a period of time between 0.1 and 10 seconds.
32. (Original) A method according to claim 19, wherein at least some of the particles removed have a dimension less than 1 micron.
33. (Original) A method according to claim 19, wherein applying the suction comprises removing the particles via a nozzle having an aperture of less than 10 mm.
34. (Original) A method according to claim 33, wherein the aperture is between 0.5 and 5 mm.
35. (Original) A method according to claim 33, wherein the nozzle is placed approximately 0.1-0.5 mm above the surface.
36. (Original) A method according to claim 19, wherein the surface is the surface of a semiconductor wafer.
37. (Currently Amended) A method for removing particles from a surface, comprising:
heating a fluid;
applying the a fluid to the surface so as to coat the particles on the surface with the fluid;
and
applying a suction force after applying the fluid so as to generate a horizontal flow velocity of the fluid of at least 100 m/s, thereby removing at least some of the particles that have a dimension of less than approximately one micron.
38. (Original) A method according to claim 37, wherein the fluid comprises water.
39. (Original) A method according to claim 37, wherein applying the fluid comprises applying the fluid through a channel held approximately perpendicularly to the surface.
40. (Original) A method according to claim 39, wherein applying the suction force comprises applying the suction force through an annular channel surrounding the channel through which the fluid is applied.
41. (Original) A method according to claim 40, wherein applying the suction force further comprises heating the annular channel and the fluid delivery channel.

42. (Original) A method according to claim 37, wherein the horizontal flow velocity is in at range of a speed of sound.

43. (Original) A method of removing a particle from a surface, comprising:
applying a fluid to the surface so as to coat the particle;
applying a laser beam to the surface such that absorption of the beam at the surface releases the coated particle from the surface substantially without causing the particle to explode;
and
removing the released particle and the fluid from the surface by means of a suction force.

44. (Original) A method according to claim 43, wherein the fluid comprises water.

45. (Original) A method according to claim 43, wherein removing the released particle comprises applying a suction force in a vicinity of the surface after applying the fluid so as to generate a horizontal flow velocity of the fluid of at least 100 m/s, thereby removing the released particle and the fluid from the surface.

46-55 (Currently Canceled)